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EXAMINER

AILES, BENJAMIN A

ART UNIT

PAPER NUMBER

2142

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/934,036	Applicant(s) KEYES ET AL.	
	Examiner Benjamin A. Ailes	Art Unit 2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to correspondence filed 03 March 2006.
2. Claims 1-39 remain pending.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 4, 7-11, 14-18, 35, 36, 38 are rejected under 35 U.S.C. 102(e) as being anticipated by Bjornson (U.S. 6,505,145 B1).
5. Regarding claim 1, Bjornson discloses a data processing system wherein more than one process plants can have access to an open network (Figure 18, col. 20, lines 24-25, Bjornson discloses a user plant that can access a plant reliability system remotely using the Internet, the Internet being just an example of what applicant's claimed as being an "open network"). Bjornson further discloses a primary server in communication with the open network, wherein the primary server is adapted to execute a plurality of data processing applications (col. 20, lines 3-14, Bjornson discloses the use of plant reliability system in communicatively coupled to the Internet, again, the Internet being just an example of what applicant's claimed as being an "open network", the plant reliability system residing on a primary server and the plant reliability system

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being a data processing application. Examiner note: It is deemed inherent for a computer server of any kind in the art to possess the ability to execute more than one data processing application.). The plant reliability system receives information from process plants (col. 7, lines 11-22, Bjornson discloses the plant reliability system may provide plant performance data, for example for the system, equipment and personnel. Quantifiable plant performance data for the system, equipment and personnel can be obtained by tracking failures of individual pieces of equipment, and by tracking the work performed by individual departments and the individuals within those departments. Thus, the personnel responsible for the installation, operation, maintenance and repair of rotating equipment provide the data for assessing plant performance. Bjornson clearly discloses in column 20, lines 24-34 the method of having data related to process control information being sent over a network to the primary server (plant reliability system), the process control information being for example, supply failure data.) Bjornson also discloses the use of a database to store information received from process control plants (see Figure 1, item 120). Finally, the primary server, or plant reliability system disclosed by Bjornson sends results from analysis back to process control plants (col. 20, lines 24-34, Bjornson discloses the plant reliability system sending the process plant information related to results gathered after analysis is performed, the results being submitted over the Internet (Open Network)).

6. Claims 35 and 38 contain similar subject matter and are rejected under the same rationale as claim 1.

7. Regarding claim 4, Bjornson discloses the system wherein the open network is the Internet (col. 20, lines 3-14, Bjornson discloses the use of a network, any types of networks could be used, and examples provided are the Internet, a LAN, a dial-up line, or other remote access methods.).

8. Regarding claim 7, Bjornson discloses the system wherein the data processing application is adapted to perform one of a plant optimization function, a real-time process monitoring function, a data reconciliation function, a plant emission analysis function, a plant emissions control function, a dispatch function, a plant control function and an alarming function (col. 3, ll. 46-49, Bjornson discloses the ability to monitor the process plant in real time.).

9. Regarding claim 8, Bjornson discloses the system wherein the data processing application is adapted to perform a data correction function (col. 3, ll. 62-67, Bjornson discloses that when a problem is found in the plant, a corrective action can be suggested.).

10. Regarding claim 9, Bjornson discloses the system wherein the data correction function is one of a digital verification function, a data validation function, a data reconciliation function, and a data source re-calibration function (col. 6, ll. 56-59, Bjornson provides the ability to perform data validation by performing synthesized and scientific analysis on data gathered.).

11. Regarding claim 10, Bjornson discloses the system wherein the data processing application uses continuous emissions monitoring data to generate a plant emissions report (col. 2, ll. 8-21, Bjornson's invention's main idea is directly related to generating

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reports based on analysis of process plants. Disclosed in column 2, lines 8-21 is just a few examples of the types of reports, plant emissions being one of them.).

12. Regarding claim 11, Bjornson discloses the system wherein the data processing application generates the plant emissions report using a format defined by a governmental authority and communicates the plant emissions report to the governmental authority (Bjornson discloses in column 2, lines 8-21 the generation of reports and the submission of these reports to governmental authorities in order to be in conformance with codes set forth by federal, state, and local regulations.).

13. Claim 36 contains similar subject matter and is rejected under the same rationale as claim 11.

14. Regarding claim 14, Bjornson discloses the system wherein the data processing application uses an internet browser application as a visualization layer (col. 20, lines 9-14, Bjornson discloses the use of the Internet to access the system. It is deemed inherent that some sort of browser or display window must be supplied in order for the user to view anything displayed.).

15. Regarding claim 15, Bjornson discloses the system wherein the internet browser application is executed within a user interface that is physically remote from the first and second process plants (col. 20, lines 15-20, Bjornson clearly discloses the use of a network (Internet) and the use of plant reliability systems remote from the actual process plants.).

16. Regarding claim 16, Bjornson discloses the system wherein one of the first and second process plants further comprises one of an internet-enabled field device, an

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internet-enabled field device interface and a data concentration node (see Figure 1, Bjornson discloses the use of Internet devices.).

17. Regarding claim 17, Bjornson discloses the system wherein the one of the internet-enabled field device, an internet-enabled field device interface and a data concentration node includes an embedded data server and an embedded data historian communicatively coupled to the embedded data server (Figure 1 and col. 20, lines 3-14, Bjornson discloses the use of Internet device in conjunction with the utilized servers and process plants.).

18. Regarding claim 18, Bjornson discloses the system wherein one of the first and second plants includes a digital communication network based on one of an RS485, Foundation Fieldbus, Ethernet TCP/IP and a wireless blue tooth protocol (col. 20, lines 3-14, Bjornson discloses the use of TCP/IP (Internet).).

Claim Rejections - 35 USC § 103

19. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

20. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bjornson.

21. Regarding claim 5, Bjornson discloses the system wherein the first process plant is in a first geographic location and the second process plant is in a second geographic location different from the first geographic location (col. 20, lines 24-26, Bjornson discloses process plants conducting transactions with the primary server (the plant

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reliability system) remotely. It is deemed obvious that separate process plants are located and can clearly be located at different geographic locations.).

22. Regarding claim 6, Bjornson discloses the system wherein the first process plant is associated with a first business entity and the second process plant is associated with a second business entity (col. 20, lines 24-26, in view of the rejection of claim 5, the same reasoning applies to claim 6, specifically the fact that Bjornson discloses process plants conducting transactions (business transactions) remotely. It is therefore deemed obvious that separate process plants are located separately and can be of different business entities.).

23. Claims 2, 3, 20-34, 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bjornson in view of Agrusa et al. (U.S. 2004/0024891 A1), hereinafter referred to as Agrusa.

24. Regarding claims 2 and 3, Bjornson discloses the use of a primary server and a data historian to perform data processing methods needed by process control plants as discussed above in the rejection of claim 1, but does not disclose the use of redundant servers and failover techniques in time of failure. Simply put, Bjornson does not disclose methods of backing up information in time of failure. The need to implement backup systems in all areas where computers are used to store data is well known in the art and many methods are put into place to ensure the safety of data in time of catastrophe. An example of a system that utilizes backup systems is disclosed by Agrusa wherein Agrusa discloses on page 1, paragraph [0006] the use of primary and secondary (backup) computer server systems. The secondary computers are utilized in

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times that the primary computing server goes down. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to implement the use of failover and back up systems in case the primary computer systems fail and become available. One of ordinary skill in the art would have found it to their advantage and would have been motivated to utilize failover systems because when a failover system is in use, systems will always be available (due to the seamless switch between primary and secondary) and the amount of production lost is greatly reduced.

25. Claim 20 contains similar subject matter and is rejected under the same rationale as claims 1, 2, and 3.

26. Claim 21 contains similar subject matter and is rejected under the same rationale as claim 7.

27. Claim 22 contains similar subject matter and is rejected under the same rationale as claim 16.

28. Claim 23 contains similar subject matter and is rejected under the same rationale as claim 17.

29. Claim 24 contains similar subject matter and is rejected under the same rationale as claims 1, 2, and 3, additionally Bjornson discloses the use of billing techniques to be based on transaction type and usage (col. 20, lines 24-26).

30. Claim 25 contains similar subject matter and is rejected under the same rationale as claims 5 and 6.

31. Claim 26 contains similar subject matter and is rejected under the same rationale as claim 7.

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32. Claim 27 contains similar subject matter and is rejected under the same rationale as claim 8.

33. Claim 28 contains similar subject matter and is rejected under the same rationale as claim 10.

34. Claim 29 contains similar subject matter and is rejected under the same rationale as claim 11.

35. Claim 30 contains similar subject matter and is rejected under the same rationale as claim 12.

36. Claim 31 contains similar subject matter and is rejected under the same rationale as claim 16.

37. Claim 32 contains similar subject matter and is rejected under the same rationale as claim 17.

38. Regarding claims 33 and 34, Bjornson discloses (col. 20, lines 15-23) the method wherein separate process control entities can purchase the use of the analysis system via a one time payment or they have the opportunity to pay alternatively by way of paying based on usage characteristics (i.e. pay per transaction performed).

39. Claim 39 contains similar subject matter and is rejected under the same rationale as claims 2 and 3.

40. Claims 12-13 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bjornson in view of Keeler et al. (U.S. 5,386,373), hereinafter referred to as Keeler.

41. Regarding claim 12, Bjornson disclosed the data processing application according to claim 1 above, but is silent on the use of plant emissions minimization and

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plant emissions optimization. However, in the related art of continuous emission monitoring, Keeler discloses multiple methods of achieving plant emissions minimization and optimization. By way of example, Keeler discloses a neural net technique used for minimization and optimization (see Keeler, col. 6, lines 8-55). It would have been obvious to one of ordinary skill in the art at the time the application was made to combine the plant emissions minimization and optimization as disclosed by Keeler with the data processing application disclosed by Bjornson. One would have been motivated to make this combination in order to create a control system for emissions minimization and optimization (see Keeler, col. 7, lines 13-22, and 26-36).

42. Regarding claim 13, Bjornson disclosed the data processing application according to claim 1 above, but is silent on the use of a compensatory control function. However, in the related art of continuous emission monitoring, Keeler discloses a method for achieving compensatory control. Keeler discloses a control function used for implementing a compensatory control function in order to optimize the inputs to the actual plant (see Keeler, col. 7, lines 12-46). It would have been obvious to one of ordinary skill in the art at the time the application was made to combine the plant emissions compensatory control function as disclosed by Keeler with the data processing application disclosed by Bjornson. One would have been motivated to make this combination in order to create a control system for emissions compensatory control (see Keeler, col. 7, lines 18-22).

43. Regarding claim 37, in accordance with claim 36, Bjornson teaches the need for a regulatory authority but does not explicitly state the use of the Environmental

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Protection Agency. Keeler discloses by way of example uses the Environmental Protection Agency (EPA). One of ordinary skill in the art would have been motivated to associate with the EPA because the EPA is well known in the art as an existing regulatory body in the government that sets up rules and regulations that industries must abide by (see Keeler, col. 1, lines 16-30, specifically lines 20-23).

44. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bjornson in view of Funkhouser (U.S. 5,784,570), hereinafter referred to as Funkhouser.

45. Regarding claim 19, Bjornson disclosed the need to send information between a client and a server (see Bjornson, col. 20, lines 3-14) but failed to disclose the use of a data compression technique. However, in related art, Funkhouser teaches the use of a data compressor that compresses the data before the data is transmitted from a server to a client (see Funkhouser, col. 2, lines 33-37). It would have been obvious to one of ordinary skill in the art at the time the application was made to utilize the data compression technique taught by Funkhouser with the client-server transmission method disclosed by Bjornson. One of ordinary skill in the art would have been motivated to make the combination in order to implement the client/server data transmission using data compression in order to allow for more effective bandwidth use and use less local memory (see Funkhouser, col. 2, lines 40-46).

Response to Arguments

46. Applicant's arguments filed 03 March 2006 have been fully considered but they are not persuasive.

47. (A) Applicant argues "Bjornson does not disclose a plurality of data processing applications, such that any of the data processing applications may be used to generate and send analysis results to multiple plants or to a remote user interface." What is recited in independent claim 1 is "a primary server communicatively coupled to the open network, wherein the primary server is adapted to execute a plurality of data processing applications" ... and "the primary server is further adapted to use one or more of the plurality of data processing applications to each generate analysis results and send the analysis results..." As mentioned above, Bjornson discloses a primary server in communication with the open network, wherein the primary server is adapted to execute a plurality of data processing applications in column 20, lines 3-14 wherein Bjornson discloses the use of plant reliability system which is communicatively coupled to the Internet, the Internet being just an example of what applicant's claimed as being an open network. The plant reliability system resides on a primary server and the plant reliability system is an example of a data processing application. Examiner notes that it is deemed inherent for a computer server of any kind in the computer arts to possess the ability to execute more than one data processing application. Through broadest reasonable interpretation of the claim, only one data processing application is needed to perform data analysis. At the least, Bjornson provides at least one data processing application to perform data analysis operations. The plant reliability system receives information from process plants (col. 7, lines 11-22, Bjornson discloses the plant reliability system may provide plant performance data, for example for the system, equipment and personnel. Quantifiable plant performance data for the system,

equipment and personnel can be obtained by tracking failures of individual pieces of equipment, and by tracking the work performed by individual departments and the individuals within those departments. Thus, the personnel responsible for the installation, operation, maintenance and repair of rotating equipment provide the data for assessing plant performance. Bjornson clearly discloses in column 20, lines 24-34 the method of having data related to process control information being sent over a network to the primary server (plant reliability system), the process control information being for example, supply failure data.) Bjornson also discloses the use of a database to store information received from process control plants (see Figure 1, item 120). Finally, the primary server, or plant reliability system disclosed by Bjornson sends results from analysis back to process control plants (col. 20, lines 24-34, Bjornson discloses the plant reliability system sending the process plant information related to results gathered after analysis is performed, the results being submitted over the Internet (Open Network).).

48. (B) Applicants argue that Bjornson does not disclose the elements of claims 10, 11 and 36 at column 2, lines 8-21 (see Bjornson). In regards to claim 10 ("at least one of the plurality of data processing applications uses continuous emissions monitoring data to generate a plant emissions report"), Bjornson clearly teaches the need for monitoring of equipment performance. The main idea behind Bjornson's invention is directly related to generating reports based on data analysis. In regards to claims 11 and 36 ("the at least one of the plurality of data processing applications generates the plant emissions report using a format defined by a governmental authority and

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communicates the plant emissions report to the governmental authority”), Bjornson discloses the metrics to be followed being set by governmental bodies (federal, state, local, etc).

49. (C) Applicants argue that Bjornson disclose the additional elements of claims 16 and 17 in figure 1 and column 20, lines 3-14 (see Bjornson). In regards to claim 16, (“one of the first and second process plants further comprises one of an internet-enabled field device, an internet-enabled field device interface and a data concentration node”), taking the broadest reasonable interpretation, the internet field device is best understood as anything that can access the Internet, which is clearly taught by Bjornson in figure 1. In regards to claim 17, (“the one of the internet-enabled field device, an internet-enabled field device interface and a data concentration node includes an embedded data server and an embedded data historian communicatively coupled to the embedded data server”), in light of above in regards to claim 16, Bjornson teaches the utilization of the Internet to perform communications between the utilized servers and process plants.

50. (D) Applicants argue in regards to claim 12 that the combination of Bjornson and Keeler does not teach “a data processing application that performs one of a plant emissions minimization and a plant emissions optimization using of a shared vector gradient technique, a neural net technique, and a Fibonacci search technique.” Examiner does not agree, Keeler teaches methods used in order to minimize plant emissions and optimize systems and discloses the use of a neural net technique.

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Keeler's teaching of using a "neural net technique" satisfies the "one of" claim requirement recited in claim 12.

51. (E) Applicants argue in regards to claim 37 that the combination of Bjornson and Keeler fails to teach "a remote user interface associated with a regulatory authority." Examiner does not agree. Bjornson discloses in column 2, lines 8-21 the generation of reports and the submission of these reports to governmental authorities in order to be in conformance with codes set forth by federal, state, and local regulations. It is deemed inherent that if a computer is used to generate a report, a computer screen interface of some sort would be used as a viewing instrument.

52. (F) Applicants argue in regards to claims 20 and 24 that neither Bjornson nor Agrusa disclose a "plurality of redundant data historians." Examiner does not agree for the same reasons as mentioned above. The need to implement backup systems in all areas where computers are used to store data is well known in the art and many methods are put into place to ensure the safety of data in time of catastrophe. Agrusa discloses on page 1, paragraph [0006] the use of primary and secondary (backup) computer server systems. The secondary computers are utilized in times that the primary computing server goes down. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to implement the use of failover and back up systems in case the primary computer systems fail and become available. One of ordinary skill in the art would have found it to their advantage and would have been motivated to utilize failover systems because when a failover system is in use, systems

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will always be available (due to the seamless switch between primary and secondary) and the amount of production lost is greatly reduced.

53. Applicant's arguments with respect to claims 5 and 6 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

54. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ikeda et al. (US 6,999,903 B2) discloses a remote monitoring diagnostic system and method including a data storage file used to collect plant data representing the operation status of a plant.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin A. Ailes whose telephone number is (571)272-3899. The examiner can normally be reached on M-F 6:30-4, IFP Work Schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571)272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


BEATRIZ PRIETO
PRIMARY EXAMINER

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

baa

Beatriz Prieto
BEATRIZ PRIETO
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